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(Catalogued as part of previous item)

Mauritius,
October 20th, 1880.

SUPPLEMENTARY REPORT

ON

ACUTE ANÆMIC DROPSY

—

The following Circular along with a copy of the Report on Acute Anæmic Dropsy, was forwarded to the leading Medical Officers in India and the Colonies, with the view of obtaining further information respecting that disease and Beriberi to which it is supposed to be allied.

MAURITIUS,
CIRCULAR — Civil Medical Department,
No. M/282. — May 25th, 1880.

Sir,

I have the honor to transmit herewith a copy of a report I have had prepared on a peculiar form of Dropsy which was Epidemic in this Colony in the years 1878-79, presenting some of the characters of Beriberi, but differing from that disease, as it is generally described, in several important particulars.

My object in thus bringing the subject directly under your notice is to obtain further information regarding this obscure disease which, so far as I know, has never been hitherto described.

Will you kindly inform me if the same, or any similar, disease is known in your locality ; and, further, if in your opinion, it is to be identified with any of the forms of Beriberi or Barbiers ?

As neither of these diseases are endemic in Mauritius, and as the accounts given of them by Authors are somewhat vague and contradictory, I should be glad if you could furnish me with a short statement of the essential symptoms and pathology of these affections and also one or two illustrative cases of each.

If you have not had opportunities of personally studying those diseases, I have no doubt that from your position you will be able to obtain the information I require.

I have the honor to be,
Sir,
Your most obedient servant,

FRANCIS LOVELL,
Chief Medical Officer.

There has not yet been time to receive replies from the more distant Colonies, such as British Guiana and the West Indies, but we have obtained important information from India and Singapore which we think it desirable to publish in the

meantime as a supplement to the Report already in the hands of the Profession.

The following letter and Report from Surgeon-Major K. Mc Leod, Health Officer of Calcutta, will be read with interest.

Office of the Corporation of the Health Officer,
Town of Calcutta.

Calcutta, 22nd July 1880.

Dear Sir,

I have received your letter dated 25th May, and the very interesting special Report on "Acute Anæmic Dropsy" which accompanied it. I have read this Report with very great interest, because we have had a disease in Calcutta and its southern suburbs which appears to be identical with your Mauritius outbreak. I send you a copy of a special report which I wrote regarding this disease early in the year and of my Quarterly Report for 1st quarter of 1880, in which this has been reproduced with some additional statistical information. There can be no doubt, I think, that the two diseases are the same. The variations in the symptons are comparatively trivial, and perhaps had our cases been as carefully observed and reported as yours, these variations would have been fewer and less prominent; but the cases on which I founded my Report were seen casually in villages and not made the subject of careful clinical observation in hospital. It would be very important to ascertain whether the disease was imported into Mauritius from Calcutta by Coolies. It prevailed in the southern suburbs at Garden Reach, whence the Cooly ships depart, in 1877-78, and it is not at all unlikely that it was conveyed in some way by means of Coolies embarking thence for Mauritius. It would be interesting to make further inquiries regarding the earlier cases, and endeavour to connect the disease with a new arrival of Coolies. If this could be done, the causal chain might be completed by enquiring at the depot here.

I remain,
Yours truly,

K. Mc LEOD.

Dr Lovell,
Chief Medical Officer,
Mauritius.

No. 397. Dated Calcutta, the 27th February 1880.

From R. Turnbull, Esq., Secretary to the Corporation of the Town of Calcutta, to the Assistant Secretary to the Government of Bengal.

I am directed to acknowledge receipt of your letter No. 143, dated 12th instant, calling for a special report on the "new disease" referred to in the newspapers as now to some extent prevailing in Calcutta.

2. Your letter under acknowledgement was referred to the Health Officer, and I have now the honor to forward a copy of the report which has been submitted by Dr. Mc Leod on the subject.

No. 122. Dated Calcutta, the 27th February 1880.

From Surgeon-Major K. Mc Leod A. M., M. D., *Health Officer, Calcutta ; to the Chairman of the Municipal Corporation of the Town of Calcutta.*

" Referring to Bengal Government letter No. 143, dated 12th February 1880, I have the honour to submit the following report regarding the " new disease " which has lately appeared in Calcutta.

2. Though this disease has been attracting special attention within the last month or two, it has prevailed in the suburbs for some time past, and has also broken out in several other parts of Bengal. The information in my possession regarding the prevalence of the malady is as follows. It is said to have been prevalent in the district ef Midnapore in the year 1876, and to have travelled thither from Orissa. On this point I have no accurate information, nor has the present Civil Surgeon of Midnapore, to whom I wrote on the subject, been able to furnish me with any. It is certain that the disease broke out in the southern suburbs (Garden Reach and its neighbourhood) in the rains of 1877, and it was again observed over a large area of the same suburbs and in some villages to the east of Calcutta in 1878. Dr. Payne alludes to it in his report for the third quarter of that year, and Drs. MacConnell and Harvey, who held the office of Civil Surgeon during the later months of the year, have reported on it. Dr. Cayley treated several cases in the Mayo Hospital in September. The disease appears to have broken out during the rains, and subsided as the cold weather advanced. The same disease prevailed in Dacca in January and February 1879, and appeared in Shillong in October 1878. Dr. O'Brien, writing in the May (1879) number of the *Indian Medical Gazette,* states that 200 cases had occurred in that Station, and that new cases were appearing daily. He believes that it was imported from Dacca, and records that it prevailed in Cachar, Sylhet, the Khasia Hills, and some of the districts of Assam Proper. His statement, as far as Sylhet is concerned, is confirmed by a " planter's doctor, " Dr. Alexander Nairne of south Sylhet, who, writing to the *British Medical Journal,* mentions that it prevailed in August and September.

3. The present epidemic made itself known towards the close of 1879. A fresh outbreak seems to have occurred in the southern and eastern suburbs, and Calcutta was invaded for the first time. The portions of the town where the disease has prevailed are continuous with, or contiguous to, those parts of the suburbs which were previously attacked, namely, the bustees belonging to Bhowanipore and Ballygunge police sections, situated immediately to the south of the South Circular Road. Through Mr. Lambert's courtesy I have had replies to a few simple questions from all the police sections of the town and suburbs regarding the locality and extent of prevalence of the disease. These replies may be summarized as follows :—

I.—TOWN.

(a)—Sections in which no cases have occurred.

A. Shampookor.
B. Coomertolly.
C. Burtollah.
D. Sukea's Street.
E. Jora Bagan.
G. Burra Bazar.
H. Colootollah.
I. Moocheeparah.
K. Puddopooker.
L. Waterloo Street.
R. Hastings.

(*b.*)—*Sections in which imported cases have been reported*

F. Jorasonko (two from Woolfut Bagan).

J. Bow Bazar (one from Chowringhee Road).

M. Fenwick Bazar (one from Mullick Bazar in Collingah).

N. Toltollah (two from Collingah).

(*c.*)—*Sections in which the disease has prevailed epidemically.*

O. Collingah (Elliott Road, Goristan Lane, Short's Bazar, and Golam Sobhans' Lane).

P. Park Street (Hill's Bazar and Choona Bustee).

Q. Bamun Bustee (Colvin Bustee and Gooreeparah.

II.—SUBURBS.

(a.) Sections in which no cases have occured.

A. Cosoipore.

B. Ooladangah.

(*b.*)—*Sections in which the disease has prevailed epidemically.*

A. Coscipon.

B. Chiptpore (Burranagore, two cases.)

C. Oolladangah.

D. Manicktola (a few cases in 1878 on Manicktola Road).

F. Entally (Gobra).

G. Baniapooker (Kurriah, Jamnuggur, and Nonapaoker).

H. Ballygunge (Malye Bustee, Aheerapooker, Shamiadar Bazar, Begg Bazar, Kurriah, and Chamarpooker.)

I. Bhowanipore (Kyroo Tallao, Woolfut Bagan, Gungaram Bustee, adjoining South Circular Road).

J, Tallygunge (Gobindpore).

K. & L. Alipore and Doorgapore (Gopalnuggur Road, Gwalior Ghat, Kallyghat Bridge Road, Moonsheeparah, Koolaparah, Moyapore, Kristopore, Bostomparah, Chetla Road, and Kassaryputty).

M. Watgunge (Kootree Road and Kalibagan).

N. Ekbalpore (Ekbalpore, Mominpore, Foolparah, Jeebun Manjee's Bagan).

O. Garden Reach (Moocheekhola and Mateabrooj).

4. From these details it is evident that the disease is more widely prevalent in the suburbs than in the town; that the northerly sections of both are as yet exempt, and that the disease

has travelled further northwards in the easterly suburbs than in the town. I have indicated roughly on the accompanying map the localities where the disease has prevailed this cold weather.

5. I have visited all the localities in the town and one place in the suburbs where the disease prevails, and from my own inquiries and the information supplied by the police it is evident that it broke out almost simultaneously in the affected localities towards the latter end of November and beginning of December, about the time of the Mohurrum.

6. The extent to which the disease has prevailed, and the mortality which it has caused, are represented in the following statement prepared from the police reports :—

I.—Town Sections.	Cases.	Deaths.
F. Jorasanko...	2	...
J. Bow Bazar	1	...
M. Fenwick Bazar	1	...
N. Toltollah	2	1
O. Collingah...	182	35
P. Park Street	13	3
Q. Bamun Bustee	65	12
Total ...	266	51

II.—Suburban sections.	Cases.	Deaths.
B. Chitpore	2	...
D. Manicktola	8	...
F. Entally	6	2
G. Baniapooker	22	4
H. Ballygunge	204	107
I. Bhowanipore	33	16
J. Tallygunge	1	1
K. & L. Alipore and Doorgapore... ...	54	6
M. Watgunge	2	2
N. Ekbalpore...	33	25
O. Garden Reach	2	...
Total ...	367	163

7. In relation to the population of the suburbs, the prevalence and mortality have been slight, and still less so in the town. I had a special inquiry made in Short's Bazar with the following results :—

Number of houses	60
Ditto inhabitants, say	390
Ditto houses attacked	10
Ditto inhabitants in these	65
Ditto attacked	15
Ditto died	10

When limited areas where the disease has prevailed are taken, of course the incidence and mortality attain higher proportions.

The rate of mortality given by the town figures is about 20 per cent., and by the suburban about 44. These figures are not, however, entitled to more reliance than to indicate that the mortality is considerable in relation to cases, though slight in relation to population.

8. The facts regarding the manner of outbreak which I have gathered are as follows :—

(*a.*) It has attacked houses in a village in a promiscuous way. The affected homesteads are mostly scattered throughout the locality, and not necessarily contiguous.

(*b.*) The rule has been that several or all the members of a house-hold have been seized, and single cases in a family are exceptional.

(*c.*) Such seizures have taken place almost simultaneously or in rapid succession, as if from the operation of a common cause.

(*d.*) Similarly, as I have already remarked, the seizure of different houses in a village appears to have been simultaneous ; indeed the disease seems to have broken out all over the infected area about the same time.

(*e.*) Recent cases are rare, and, according to the latest information I have gathered, the disease would seem to be dying out.

9. The symptoms of the disease are very definite, viz.—

(*a.*) Swelling of the limbs—the lower always, sometimes the upper, and occasionally the body.

(*b.*) Fever sometimes before and sometimes after the swelling, and in some cases altogether absent.

(*c.*) Bowel complaint in many cases—diarrhœa most commonly, dysentery in a few.

(*d.*) Burning and pain in the affected limbs at the commencement.

(*e.*) Shortness of breathing and cough, and palpitation in all cases.

(*f.*) Great emaciation, exhaustion, and anæmia in severe cases, slighter but well marked in all.

(*g.*) The duration of the disease appears to be about two months in cases of average severity, but it leaves its victim greatly enfeebled.

(*h.*) In fatal cases great disturbance of respiration and circulation have been described, and death has generally been sudden.

The foregoing details will probably be considered sufficient for a public report. The malady is undergoing careful investigation in the hospitals, and important information regarding its phenomena is being recorded in the *Transactions of the Calcutta Medical Society.*

10. As regards the nature of the disease, it is impossible as yet to write very definitely. The prevailing opinion appears to be that it is the same disease as has been described by observers

in Madras and Ceylon under the term Beri-beri. I am myself inclined to favour this view, but the point has not been definitely settled yet, and it would be out of place to discuss it here.

11. As regards causation, I am not able to pronounce a positive opinion :—

(*a.*) Though it is most prevalent among the poorer classes of Mahomedans and Hindus, it is by no means confined to these. Eurasians, Armenians, and natives in good circumstances have also suffered.

(*b.*) I cannot attribute it to poverty of living, high price of food, or any dietetic condition or consequent constitutional taint. Well fed Mahomedan butchers, accustomed to generous living and in excellent bodily condition, have been seized, and although I have observed indications of anæmia and scurvy in some cases, I am inclined to consider them secondary conditions due to the disease, and not the cause of it.

(*c.*) Nor have I observed any special insanitary conditions associated with its prevalence. The sanitary conditions of the households and villages in which the disease has broken out are certainly no worse than those of hundreds of others in town and suburbs, where no disease has prevailed. In short, I have been unable to fix upon any one condition or assemblage of conditions, personal or otherwise, peculiar to the affected places.

(*d.*) As regards infectiousness, the evidence is very conflicting. Dr O'Brien considers the disease to be very infectious, and gives good reasons for his belief. Facts have come to my knowledge which favour the impression that the disease is communicable, while others have opposed that view. If it is infectious (and I am not prepared to deny this), it is so under conditions, seasonal and otherwise, which strongly modify its manner of transfer from man to man. The gradual spread northwards, the pronounced localization, and the seizure of whole families are the most remarkable circumstances in the natural history of the malady considered from an epidemological point of view.

12. As regards relief measures, I am of opinion that no special steps are required. The people have been resorting to hospitals and dispensaries, and those able to afford it calling in medical practitioners. The disease has not attained dimensions demanding special relief measures, and the existing organizations for public medical relief are quite able to cope with the emergency. Though no special remedy has been discovered for this disease, judicious medical treatment is capable of relieving urgent symptoms and accelerating recovery. Many of the people labouring under the disease would not take European medicines if they were sent to their houses, and those who desire medical advice and medicines know where to send or go for them. I cannot specify any sanitary measure which is specially indicated. In one affected village (Hill's Bazar) I found the drainage in a

very bad condition ; in another (Elliott Road) a very foul tank exists. I have strongly recommended that both these faults should be remedied, and measures are being taken to that end.

13. Though the disease appears now to be abating or dying out, it is quite possible, nay probable, that it will break out again during or after next rains, and perhaps advance northward beyond its present limits. I shall keep myself carefully informed on the subject, and report if any extension or revival takes place." *Surgeon-Major McLeod. M.A. M.D.*

It will be seen from the above that under the name of " The New Disease," Acute Anæmic Dropsy has been Epidemic in some parts of the Bengal Presidency since 1876. No one can doubt that the disease described by Dr Mc Leod in the above report is identical with that which has epidemic in Mauritius in 1878—79. It mode of commencement, symptoms, duration, the manner in which it spread, and the classes affected, place the identity of the new disease of Calcutta with the Acute Anæmic Dropsy of Mauritius beyond question.

It will be observed that for at least a year before the disease appeared in Mauritius it was prevalent in the suburbs of Calcutta, and as we learn from Dr Leod's letters, in the very neighbourhood of the place whence the Coolie ships leave for this Colony. This is unquestionably an important fact and seems to prove conclusively that the disease was introduced from Calcutta.

It will be remembered that Dr Clarenc has all along contended that Acute Anæmic Dropsy is contagious ; and in private communications to Dr Davidson, written while the Report was being compiled, he expressed his conviction that the disease had been introduced from Calcutta. As the Report was intended to record ascertained facts rather than opinions, it was not thought to be desirable, at the time, to publish these letters ; but the information we have now received gives a fresh interest and importance to Dr Clarenc's views, and he has kindly furnished the following statement in reply to a letter addressed to him by the Chief Medical Officer asking him to state the grounds upon which he concluded that the disease was brought from India.

Moka, ce 22 Septembre 1880.

Monsieur et honoré confrère,

J'ai toujours pensé que l'hydropisie qui a sévi épidémiquement à Maurice fin 1878 et en 1879 avait été introduite par un convoi d'Immigrants, mais les premiers malades que j'ai observés au Quartier Militaire étant tous d'anciens immigrants, les renseignements que vous me demandez sur leur compte ne vous méneraient à rien. Ce que je puis vous dire, et que j'ai déjà signalé au Dr Davidson dans le but d'élucider ce point sur lequel j'avais appelé son attention dans ma correspondance avec lui, c'est que le premier malade du Quartier Militaire, Mahamode Newaj, qui a importé la maladie dans le quartier, était un prêtre musulman qui passait une grande partie de son temps aux Pailles, où je crois que la maladie a débuté parmi d'anciens Immigrants, de retour de l'Inde vers le mois de Septembre 1878.

J'ai interrogé, à votre intention ce matin un indien du nom de Lutchmun dont voici l'histoire :

Cet homme parti pour l'Inde à bord du Canada, 15 jours après les courses de 1878, avait habité Flacq, et 40 jours avant son départ la Grande Rivière. Il n'était pas malade au moment de s'embarquer et dans la case qu'il habitait à la Grande Rivière ni auprès de cette case personne n'était malade. Parmi les passagers du *Canada* il y avait plusieurs malades, quelques uns avec de l'enflure aux jambes.

Ni au bureau de l'Immigration à Calcutta ni dans son village au fond de l'Inde (un jour et demi de chemin de fer et 15 jours de charrette) il n'a vu de malades atteints d'enflure des jambes.

A bord de l'*Altair* arrivé à Maurice le 12 Février 1879, il a vu un Indien dont il ignore le nom, mais dont le fils s'appelait Partab et qu'il fréquentait beaucoup à bord. Cet homme qui habite actuellement Rochebois et que Lutchmun retrouverait peut être, était atteint de l'hydropisie contractée probablement dans l'Inde. Lutchmun fut pris lui-même de cette maladie à bord de l'*Altair*.

Il résulte de ces faits que Lutchmun a contracté la maladie au contact d'un homme qui en avait été atteint dans l'Inde. Si on pouvait savoir où celui-ci avait pris le mal on arriverait à savoir s'il sévissait depuis longtemps dans cette localité et si des hommes partis de là pour Maurice ne l'ont pas porté ici.

Je vais faire des recherches du côté des Pailles et si elles me donnent un résultat digne de vous intéresser je vous en ferai part immédiatement.

Croyez-moi, mon cher confrère, &c.,

Dr. Clarenc.

We have no reason to suppose that the disease existed in Mauritius before the month of September 1878, and it is thus probable that it was introduced by some vessel arriving from Calcutta in August, September, or the beginning of October. We have, however, failed to trace its introduction, although the case of Lutchmun related by Dr. Clarenc shews how readily the disease may have been introduced without attracting notice, especially by those ships which bring some twenty or thirty Old Immigrants as passengers and who have no Medical Officer on board. The following is a list of the vessels which arrived from India from the beginning of August up to November 8th, at which date the disease had already broken out in the Colony.

Vessels	Date of Arrival.	Number of Coolies or Indian Passengers
1—Canada	August 11th,	489 Coolies
2—Maggie Seed ...	„ 15th,	29 Indian Passengers
3—Nenuphar	„ 24th,	29 „ „
4—Fathe Salem... ...	„ 25th,	31 „ „
5—Belle Flower... ...	„ 26th,	18 „ „
6—Liftscombs	Sept. 9th,	22 „ „
7—Queen of the Age...	„ 10th,	33 „ „
8—Zuleika...	„ 16th,	27 „ „
9—Allum Ghier... ...	„ 17th,	69 „ „
10—Henrietta	Nov. 8th,	29 „ „

We have no information regarding any of these vessels excepting the "Canada." The passengers by all of them had no doubt been reported healthy and been admitted to pratique in the usual way. The Immigration Department can give us no information regarding the distribution of Indian Passengers.

The following is the statement respecting the health of the Coolies and others on board the "Canada." And it will be seen that there is no evidence of the existence of the disease either among the Coolies or Crew; although it is just possible that it may have been overlooked.

Health state of Crew and Passengers (Coolies) as reported by Dr. Barraut on the arrival of the "Canada" healthy.

Diseases which occurred during the voyage:

Dysentery.

Pericarditis.

Fractura.

Abscessns.

Diseases of the eyes.

Asphyxia.

Deaths which took place on board the "Canada":

I Infant, 3 months old, from asphyxia, overlaid in bed.

1 of the Crew from phthisis.

Diseases which occurred at Cannoniers' Point during the stay there of the Immigrants:

Phthisis, Dysentery, Guinea Worms, Purulent Ophthalmy, Abscess, Intermittent Fever, Dyspepsia, Diarrhœa, Keratitis and Syphilis.

It is obviously in the highest degree improbable that an affection so uncommon should have spontaneously broken out in countries so distant and diverse as India and Mauritius. The outbreak too was not simultaneous but successive, and as we now know, the disease was common at the very spot in Calcutta whence the Coolie vessels depart before it appeared in Mauritius. The inference that it was introduced from Calcutta will thus not loose in force even if we cannot discover by what particular vessel it may have been brought.

If then the disease was introduced, and of this there can be no possible doubt—We must conclude that it is infectious or contagious. And we must also dismiss, as we have already given our reasons for dismissing, the theory that Acute Anæmic Dropsy is only another form of malarial fever. It is much to be desired that our friends in India would try to discover its period of incubation. The following letter from Surgeon-General W. R. Cornish of Madras is very interesting. We learn from it that the disease is unknown at Madras—a fact which indicates something peculiar in respect to the laws regulating its contagiousness. It would seem to be contagious only in certain circums-

tances, and that the conditions favourable to its spread are not generally met with either among Europeans or natives of Madras. This was also observed here in Mauritius, and led to the opinion that it was neither transportable nor transmissible by human intercourse. The opinion of a gentleman of Dr. Cornish's abilities and experience that the disease is not beri-beri, will be received with respect ; while the fact that Acute Anæmic Dropsy although existing in Bengal did not extend to the neighbouring Presidency during the famine is convincing evidence that the disease is not one of nutrition.

No. 31.

Ootacamund 4th August 1880.

From the Surgeon General with the Government of Madras to the Chief Medical Officer, Civil Medical Department Mauritius.

Sir,

I have the honor to acknowledge with thanks your Circular M. 282 of the 25th May 1880, with report on Acute Anæmic Dropsy.

2. I regret I am unable to give you any information from my own personal knowledge, as to the nature of the disease, as it has not been noticed in any part of the Madras Presidency, but you will find on reference to the Indian Medical Gazette, that the same disease was common in Calcutta and its suburbs, and in some other districts of Bengal in 1878 and 1879.

3. I am quite satisfied that the disease as described in the report was not the " béri-béri " endemic in our northern districts on the Eastern Coast, in which disease the staggering gait, and disordered nervous sensations, are the more prominent features.

4. The experience of the Calcutta practitioners led them to suppose that if the disease was not actually contagious, the causes were common to all the individuals of a family, as it ran though a house or locality like an ordinary contagious disease. You notice, I observe, that the disease in Mauritius affected the Bengal emigrants more than those from Madras, although you do not show that there were any grounds for supposing that the Bengal emigrants introduced the disease into the Island. I think it is not improbable that you got it through the Bengal emigrants, but a careful examination of the facts, as to dates of outbreak in Bengal and Mauritius would be necessary to settle this point.

5. During the famine of 1877 and 78, I had a very large experience of the results of chronic deficiency of food. Anæmia and general dropsy were most common, but the peculiar symptoms noted by you were never observed. I notice n the Calcutta reports on "Acute Anæmic Dropsy" that it occured in the well fed and well-nourished, as well as among the poor and ill-nourished, and these facts would seem to take your Mauritius epidemic out of the category of diseases dependant on innutrition.

I have the honor to be,
Sir,

Your most obedient servant,
W. M. CORNISH,
Surgeon General with the Government of Madras.

We have received the following communications from Drs. Rowell and Anderson of Singapore. The description of Beriberi by Dr. Anderson, founded as it is upon such a vast experience, (1000 cases) is of the highest value.

It will be seen that he does not commit himself to the view that Beriberi and Acute Anæmic Dropsy are identical. His symptomatology of Beriberi compared with that of our Epidemic as given in the former Report or in that of Dr. McLeod makes it perfectly evident that the two diseases are distinct. True Beriberi is neither contagious nor, in the strict sense of the word, epidemic, while Acute Anæmic Dropsy is both. This is a strong argument against the identity of the two affections, but the individual symptoms in the two diseases and their combination, and the order in which those that are common to both manifest themselves seem to put the question beyond controversy. We have not thought it necessary to reproduce the report alluded to by Dr. Rowell upon the outbreak of Beriberi in the Prisons at Singapore. It was written by Dr. Anderson who has given us in a condensed form the leading futures of the disease as detailed in that report. Dr. Rowell points out very clearly some of the differences between Acute Anæmic Dropsy and Beriberi.

No. 192.

Singapore, 26th July 1880.

To
The Chief Medical Officer,
Civil Medical Department,
Mauritius,

Sir,

I have the honor to acknowledge receipt of a copy of your report on a disease described by you as "Acute Anæmic Dropsy" and to forward at the same time for your perusal a copy of one which I have recently had drawn up for the information of the Secretary of State for the Colonies on an outbreak of the disease known as Beriberi and which has occurred in our Criminal Prison here. I may mention that this disease at the present time seems prevalent throughout the Malayan Peninsula generally, as well as in different parts of Sumatra as Langkat and Delli; it has been also creating ravages among the troops at Acheen where it has been specially fatal, and as you will have doubtless heard has been visiting Calcutta where it has hitherto been unknown.

With regard to its communicability, I hold the same opinion as yourself, and cannot consider it infectious or contagious in the sense that Small Pox or Scarlet fever is. I have seen cases of Barbiers, and regard it as quite a different form of the disease.

In this Epidemic we had no "burning of the hands and feet" which is so characteristic of Barbiers, and in which too paralysis is *the* prominent symptom. There are other essential points in which the epidemic you describe has differed from ours. Symptoms of paraplegia have been more or less marked, the bowels have as a rule been constipated, diarrhœa as a premonitory sign has been quite exceptional. Nor has there been any rubeolar eruption of the skin followed by either phlyctenulæ or petechiæ. You will observe also that all classes of natives have been equally attacked, Europeans and female native prisoners alone escaping.

Vomiting was pretty frequent, but not as a premonitory sign as a rule—it often supervened in the ordinary course of the disease.

Our most rapidly fatal cases were those which showed least symptoms of œdema.

Fever was rare. Notwithstanding these apparently marked differences between the two epidemics there are many points in which they have much resemblance, and I am inclined to think that the difference lies more in the severity of the outbreak than in its nature—more in degree than in kind. I lean to this opinion on account of there having been among our milder cases some closely resembling yours.

I should be glad to know whether your rainfall has been in any way excessive or not.

I am,

Sir,

Your most obedient servant,

I IRVINE ROWELL, M.D.,
Principal Civil Medical Officer.

EPITOME OF SYMPTOMS OF TRUE BERI-BERI.

by Dr. Anderson.

The symptoms of Beri-beri which I have observed are these :—

The patient complains first of lassitude, heaviness in the legs as if a weight was attached to the knee joint, formication and inability to walk. After a few days, these symptoms extend upwards to the middle of the thigh by which time the hands and arms become similarly affected, and the skin over the lower part of the abdomen becomes also the seat of formication, and insensibility to pain. The bowels become sluggish, there is loss of appetite, frequent vomiting, nothing can be retained in the stomach; urine scanty, continued thirst, but difficulty in swallowing, laborious breathing, fluttering action of the heart, sounds being irregular and muffled owing to effusion of serous fluid into the cavity of the pericardium, œdema of the legs and face ; death generally speaking occurring suddenly. The mental faculties are perfect to the last.

I conceive from personal observation of over 1,000 cases and from post mortem examinations, that the disease is climatic and due to malarial influences diffused or circumscribed, and its essential nature to be, serous effusion within the " Dura Mater Spinalis." There were found also effusion within the Pericardium and Pleura and congestion of the kidneys.

It attacks Europeans as well as Natives. The only real plan for its relief seems to be removal of the patient to a higher level of country as has been well illustrated in Java, where the disease is prevalent.

The longest duration of a case of Beri-beri that I have seen

was 3 years and ended in recovery. The shortest to my recollection without reference to notes was 10 days. The gait in walking is peculiar, the toes are placed first on the ground and the heels afterwards with a sudden jerking motion, which has given rise in the " Amboynas " to the name for this disease of " glass feet," that is, the patient appears as if he was walking over pieces of broken glass and afraid to injure his feet.

I have appended a memo of general treatment.

A. J. Anderson.

P.S.—As far as Mauritius is concerned it should, I think, be borne in mind that the Coolies, who I believe are chiefly from the Madras coast, may bring the disease with them. Beri-beri, supposing this to be the disease now prevalent in Mauritius, has been common on that coast from time immemorial and as the malarial poison may take several months to develope itself, it is possible that many of the Coolies going to Mauritius may have the germs of the disease contracted before their arrival.

It is quite impossible to explain how Beri-beri appears in isolated places, and fixes itself there for a time.

Barbiers is quite a distinct disease.

General Treatment of Beri-Beri.

1. Free evacuation of bowels by elaterium or compound powder of jalap, and if necessary, by purgative enemata.

2. Counter irritation to spine by blisters or sinapisms.

3. Blisters over region of heart should there appear any symptons of effusion into the pericardium or pleura.

4. Friction with stimulating liniments to extremities. Application of the bruised root bark of the horse radish tree—(in Malay " akar-kelor ", Moringa Pterygosmerma) — with warm water is a favorite mode of counter-irritation amongst the natives, and can be used freely.

Diet :—Milk and strong soups in small quantities at a time, as the stomach will not bear large draughts of any kind.

Gin or arack, with soup also in small quantities at a time.

Conge water is at all times preferable to plain water.

The Imperial drink of the Pharmaeopœia should be given also, so as to induce a greater flow of urine.

Tonies, such as strychnine, or iron diuretics and laxatives.

The above are the prineipal indications of treatment and can be varied according to symptoms.

℞

Liquor. Strychniæ	...	...	...	℥ iij
Tinct. Ferri Perchloridi		...	...	℥ v
Potassæ Chloratis	...	...	...	℥ v
Aquæ ad :	...	...	...	... ℥ xxx—misce

℥ i to be taken three times a day after meals.*

Steel diuretic.

℞

Tinct. Ferri Perchloridi		...	...	℥ iij
Tinct. Digitalis ...	...	...	...	℥ i
Liquor. Ammoniæ Acet.		...	...	℥ vi
Spiritus Ætheris Nitrosi		...	...	℥ vi
Potassæ Acetatis	...	...	...	℥ ij
Potassæ Nitratis	...	...	...	℥ ij
Acidi Acetic. diluti	...	...	...	℥ ij
Aquæ ad :	...	...	...	... ℥ xij—misce

℥ i to be taken 3 times a day.†

Letters in reply to our Circular have also been received from Dr. Hart, Sierra-Leone, and from the Principal Medical Officer of Barbadoes. The disease has not been observed in either of those Colonies.

ANDREW DAVIDSON,

F. R. C. P.

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* A Tonic when the acute symptoms have disappeared, and paralysis of muscles remain.

† A Diuretic which has been found very valuable in cases where the œdema is a prominent symptoms.

A. J. A.


MAURITIUS
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